

SUB C2

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21. Use of a nucleic acid according to Claim 1, of a vector according to
Claim 11, of a cell according to Claim 12, of a polypeptide according to Claim 13, or of
a pharmaceutical composition according to Claim 19 for preparing an agent for exerting
an effect on the binding of fibrinogen to blood platelets.

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25. Process according to Claim 23, characterized in that the antibody-
encoding nucleic acids are used for expressing recombinant antibody chains, or
derivatives or fragments thereof.

REMARKS

In accordance with 37 C.F.R. 1.821(C), Applicants submit herewith the Sequence Listing for the above-identified application both in paper copy form and in computer readable form.

The name of the file on the computer readable form is 05649049.APP. The paper copy and the computer readable copy are the same.

Claims 1-25 are currently pending. In response to the Examiner's request made during a telephone interview on April 18, 2001, claims 3, 6, 11, 12, 13, 16, 17, 19, 20, 21 and 25 are amended herein to eliminate multiple dependencies. Claims 1-25, as amended, are presented for reconsideration.

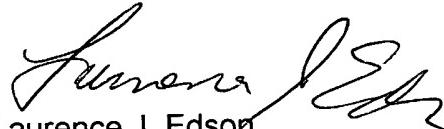
In view of the amendments and remarks above, Applicants submit that this application is in condition for examination on the merits and request consideration and favorable action thereon.

If for any reason, the Examiner feels the application is not now in condition for examination, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not considered to be timely filed, Applicants hereby petition for an appropriate extension of time. The fee for this extension may be charged to our Deposit Account No. 01-2300, along with any other fees which may be required with respect to this paper.

Respectfully submitted,

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Enclosures: Marked-Up Copy of Claims
Substitute Tables 3, 6, 7a and 7b
Petition for Extension of Time
Sequence Listing

#28633-1

MARKED-UP CLAIMS

3. (Twice Amended) Nucleic acid according to [either] Claim 1 [or 2], which furthermore comprises a CDR2 region, selected from:

- (a) a nucleotide sequence which encodes the amino acid sequence:

D I S Y S G S T K Y K P S L R S, (SEQ ID NO:35)

- (b) a nucleotide sequence which encodes the amino acid sequence:

V I S Y D G S N K Y Y A D S V K G, (SEQ ID NO:36)

and

- (c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b).

6. (Twice Amended) Nucleic acid according to Claim 4 [or 5], which furthermore comprises a CDR2 region selected from:

- (a) a nucleotide sequence which encodes the amino acid sequence:

G S H Q R P S, (SEQ ID NO:41)

- (b) a nucleotide sequence which encodes the amino acid sequence:

S N N Q R P S, (SEQ ID NO:42)

and

- (c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b).

11. Vector, characterized in that it

- (a) contains at least one copy of a nucleic acid according to [one of Claims] Claim 1 [to 3] and/or at least one copy of a nucleic acid according to [one of Claims] Claim 4 [to 6] or
- (b) contains at least one copy of a nucleic acid according to Claim 7 [or 8] and/or at least one copy of a nucleic acid according to [Claims] Claim 9 [or 10].

12. Cell, characterized in that it

- (a) expresses a nucleic acid according to [one of Claims] Claim 1 [to 3] and/or a nucleic acid according to [one of Claims] Claim 4 [to 6] or
- (b) a nucleic acid according to Claim 7 [or 8] and/or a nucleic acid according to Claim 9 [or 10].

13. Polypeptide, characterized in that it

- (a) is encoded by a nucleic acid according to [one of Claims] Claim 1 [to 3] and/or a nucleic acid according to [one of Claims] Claim 4 [to 8] or
- (b) by a nucleic acid according to Claim 7 [or 8] and/or a nucleic acid according to Claim 9 [or 10].

16. Polypeptide according to [one of Claims] Claim 13 [to 15], characterized in that it is coupled to a labelling group or a toxin.
17. Antibody against a polypeptide according to [one of Claims] Claim 13 [to 16].
19. Pharmaceutical composition which comprises, as the active component, a nucleic acid according to [one of Claims] Claim 1 [to 10], a vector according to Claim 11, a cell according to Claim 12, a polypeptide according to [one of Claims] Claim 13 [to 16] or an antibody according to [either] Claim 17 [or 18], where appropriate together with other active components and pharmaceutically customary adjuvants, additives or excipients.
20. Use of a nucleic acid according to [one of Claims] Claim 1 [to 10], of a vector according to Claim 11, of a cell according to Claim 12, of a polypeptide according to [one of Claims] Claim 13 [to 16], of an antibody according to Claim 17 [or 18], or of a pharmaceutical composition according to Claim 19 for preparing an agent for the diagnosis or for the treatment or prevention of AITP.

21. Use of a nucleic acid according to [one of Claims] Claim 1 [to 10], of a vector according to Claim 11, of a cell according to Claim 12, of a polypeptide according to [one of Claims] Claim 13 [to 16], or of a pharmaceutical composition according to Claim 19 for preparing an agent for exerting an effect on the binding of fibrinogen to blood platelets.

25. Process according to Claim 23 [or 24], characterized in that the antibody-encoding nucleic acids are used for expressing recombinant antibody chains, or derivatives or fragments thereof.

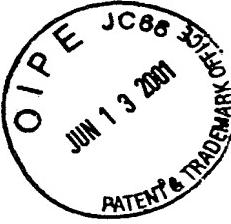


Table 3

A. Heavy Chains				B. Light Chains			
Clones	SEQ ID	FR1	Clones	SEQ ID	FR1	Clones	SEQ ID
VH4.11	2	QVQLQESGEGLYVRPSETLSSLTCVSGGSIS	SYWS	WIRQPPGKGLEWIG	YIYSGSTNNPSILKS	DPL2	RVTISVDRSKNQFSLKLSSVTAADTAVYYCAR
PDG7	-	--K-L--	G-S-R	--S-	D-S----K-K---R-	PDG7	--L-----N----
PDG8	-	-	-	-	-	PDG7	-
PDG10	-	-	-	-	-	PDG7	-
PDG16	-	-	-	-	-	PDG7	-
1.9III	6	QVQLVESGGGVVQGRSLRLSCAASGETES	SYGMH	WVROQAPGKGLEWVA	VISYDGSNKYYADSVKG	RFT1SRDNASKNTLYQMNSTRADDTAVYYCAM	ALGSNGGDHYMDV
PDG13	-	--K-L--	--A--	-	-	-A-----R	ALGSNGGDHYMDV
PDG17	-	-	-	-	-	-	ALGSNGGDHYMDV
PDG31	-	-	-	-	-	-	ALGSNGGDHYMDV
PDG37	-	-	-	-	-	-	DRPIARWTYGGMDV
H85255	-	-	-	-	-	-	-

Clones	SEQ ID	FR1	Clones	SEQ ID	FR1	Clones	SEQ ID
DPL2	4	VLTOPPSASGPQGRVTISC	SGSSSNIGSNTVH	WYQQLPGTAPKLLY	SNNQRPS	GVPDRFGSGSKSGTSASLASLISQSEDEADYC	AADDLSNG
PDG7	-V-	-W-	-R--P-S	-H-V-----F	GS---	-R---G-AG---	-T---G---PV
PDG8	-	-	-	-	-	-	-
PDG10	-	-	-	-	-	-	-
PDG16	-	-	-	-	-	-	-
DPL2	8	VLTOPPSASGPQGRVTISC	SGSSSNIGSNTVH	WYQQLPGTAPKLLY	SNNQRPS	GVPDRFGSGSKSGTSASLASLISQSEDEADYC	AADDLSNG
PDG13	-V-	-	-	-	-	-	-WV
PDG17	-	-	-	-	-	-	-
PDG31	-	-	-	-	-	-	-
PDG37	-	-	-	-	-	-	-

FR: Framework region; CDR: complement-determining [sic] region. The top sequences (VH4.11; 1.9III; DPL2) are given for comparative purposes and in each case represent the deduced amino acid sequence for the most closely related published strainline gene sequence. Dashes denote identity. M8255 refers to the EMPL/GenBank reference number and denotes the deduced amino acid sequence of the human anti-GPIb autoantibody 257 (Kunicki et al., J. Autoimmun. 4 (1991), 433-446). In the case of the heavy chain, the first three amino acids (QVK) are specified by the pComb3 vector sequence. The amino acid sequences of the heavy chains of PDG7 and PDG13 are presented in SEQ ID NO:2 and 6, respectively. The amino acid sequences of the light chains of PDG7 and PDG13 are presented in SEQ ID NO:4 and 8, respectively.

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Table 6

anti-Id phage clones antiidiotypic phab clones (AI-X and AI-B)	H Chain					L Chain		
	Seq. ID No(s).	V _H family	Straightline Gene	Homology (%) *	Seq. ID No(s).	V _L family	Strainline gene	Homology (%) *
AI-X16	10, 54, 74, 75, 43	V _H 3	DP47	88	12, 80, 81	V _L 2	DPL10	88
AI-X24	-	V _H 3	DP47	88	-	V _L 2	DPL10	88
AI-X17	76	V _H 3	DP47	87	-	V _L 2	DPL10	88
AI-X39	16, 55, 77, 44	V _H 3	DP49	94	-	-	-	-
AI-X40	123, 56, 78, 45	V _H 3	DP31	95	-	-	-	-
AI-X20	14, 57, 79, 46	V _H 4	DP71	78	-	-	-	-
AI-B14	22, 83, 84, 85	V _H 3	DP46	91	-	-	-	-
AI-B17	-	V _H 3	DP46	91	-	-	-	-
AI-B18	24, 86, 87, 88	V _H 1	DP10	85	-	-	-	-
AI-B24	26, 127, 88, 89	V _H 3	DP49	81	122, 116, 99	V _L 3	3h	82
AI-B38	30, 94, 98, 90	V _H 1	DP5	98	-	-	-	-

* Highest homology (in %) of the amino acid sequences of the respective phab clones with sequences of known strainline V genes

Table 7a

FR: Framework region; CDR: complement-determining [sic] region. The top sequences (DP47, DP49, DP31, DP71 and DPL10) are given for comparative purposes and represent the most closely related known strainine sequences. Dashes denote identity. In the case of the heavy chain, the first three amino acids (QVK) are specified by the pComb3 vector sequence. The amino acid sequences of the heavy chains of AIX16, AIX39, AIX40, AIX20 and DPL10 are given in SEQ ID NO:10, 16, 123 and 14, respectively. The amino acid sequences of the CDR1 regions of the heavy chains of AIX16, AIX39, AIX40, AIX20, DP47, DP49, DP31 and DP71 are presented in SEQ ID NO:54, 55, 56, 57, 103, 104, 105 and 106, respectively. The amino acid sequences of the CDR2 regions of the heavy chains of AIX16, AIX17, AIX39, AIX40, AIX20, DP47, DP49, DP31 and DP71 are presented in SEQ ID NO:74, 76, 77, 78, 79, 107, 108, 109 and 110, respectively. The amino acid sequence of the light chain of AIX16 is presented in SEQ ID NO:12. The amino acid sequences of the CDR1, CDR2 and CDR3 regions of AIX16 are presented in SEQ ID NO:80, 81, and 82, respectively. The amino acid sequences of the CDR1, CDR2 and CDR3 regions of DPL10 are presented in SEQ ID NO:121, 125 and 126, respectively.



Table 75

A. Heavy Chains				SEQ ID FR1				SEQ ID CDR1				SEQ ID FR2				SEQ ID CDR2				SEQ ID FR3				SEQ ID CDR3				SEQ ID FR4				
Clones	SEQ ID	FR1			ID	CDR1			ID	CDR1			ID	CDR2			ID	CDR2			ID	CDR3			ID	CDR3			ID	CDR3		
DP46	QVQLVSEGGVVQFGRSLRLSCAASGFTFS	91	SYAMH	95	WVRQAPGKLEWVA	VISYDGSNNKYADSVKG	RFTISRDNSKNTLYLQMSNLSRAEDTAVYCAR	--S-----	N-----	ST-----	F---																					
AI-B14	22	--K-L-----		83	D-G--	84					A-----																					
AI-B17	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DP-10	QVQLVSGAEVKKRGSSKVSKASGGTT	92	SYAIS	96	WVRQAPGKLEMNG	GIIPIFGTANYAQKFGQ	RVTIPIADETSTAYMILSLRSRDTAVYCAR	--B-----	B-----	R-T-DDSGI-----																						
AI-B18	24	--K-LE-----	M-----	86	-HT--	87					--T-----	V-----																				
DP-49	QVQLVSEGGVVQFGRSLRLSCAASGFTFS	93	SYGMH	97	WVRQAPGKLEWVA	VISYDGSNNKYADSVKG	RFTISRDNSKNTLYLQMSNLSRAEDTAVYCAR	--A-SN-G-T-----	V-----	S-----	Y-S-----	VR																				
AI-B24	26	--K-L-----	L-----	127	K-AI-	88																										
DP-5	QVQLVSGAEVKKRGASVKVSKVSGYLT	94	ELSMH	98	WVRQAPGKLEMNG	GFDPEDEGTIAQKFGQ	RVTMTEDTSTDAYMELSLRSRDTAVYCAT	--	--	--	--																					
AI-B38	30	Q-K-LE-----		94	--	--																										

B. Light Chains														
Clones	SEQ ID	FR1		ID	CDR1		ID	CDR2		ID	CDR3		ID	CDR4
VL3h	SYVLTOQPSVSVAPGKTARTIC	100	GGNIGSKSVH	WYQQKPGQAPVLTIT	101	YDSDRPS	E-----	FIPERFGNSGNATLITISRVEAGDEADYC	102	QWSSSSDH				
AI-B24	-V-----	RQ--T---	122	--YK-----	--	V-----	116	E-Y---						TIFGGSTKLTVLRQPKAAPSVTLFPPSS

FR: Framework region; CDR: complement-determining [sic] region. The top sequences (DP46, DP10, DP49, DP5 and VL3h) are given for comparative purposes and represent the most closely related known strainline sequences. Dashes denote identity. In the case of the heavy chain, the first three amino acids (QVK) are specified by the pComb3 vector sequence. The amino acid sequences of the heavy chains of A1-B14, A1-B24 and AI-B38 are presented in SEQ ID NO:22, 24, 26 and 30, respectively. The amino acid sequences of the CDR1 regions of the heavy chains of A1-B14, A1-B18, A1-B24, AI-B38, DP-46, DP-10, DP-49 and DP-5 are presented in SEQ ID NO:83, 86, 127, 94, 91, 92, 93 and 94, respectively. The amino acid sequences of the CDR2 regions of the heavy chains of AI-B14, AI-B18, AI-B24, AI-B38, DP-46, DP-10, DP-49 and DP-5 are presented in SEQ ID NO:84, 87, 88, 95, 96, 97 and 98, respectively. The amino acid sequence of CDR3 regions of the heavy chains of AI-B14, AI-B18, AI-B24 and AI-B38 are presented in SEQ ID NO:85, 88, 89 and 90, respectively. The amino acid sequences of the light chains of AI-B24 is presented in SEQ ID NO:28. The amino acid sequences of the CDR1, CDR2 and CDR3 regions of the light chains of AI-B24 are presented in SEQ ID NO:122, 116 and 99, respectively. The amino acid sequences of the CDR1, CDR2 and CDR3 regions of the light chains of VL3h are presented in SEQ ID NO:100, 101 and 102, respectively.